

Natural Heritage & Endangered Species Program

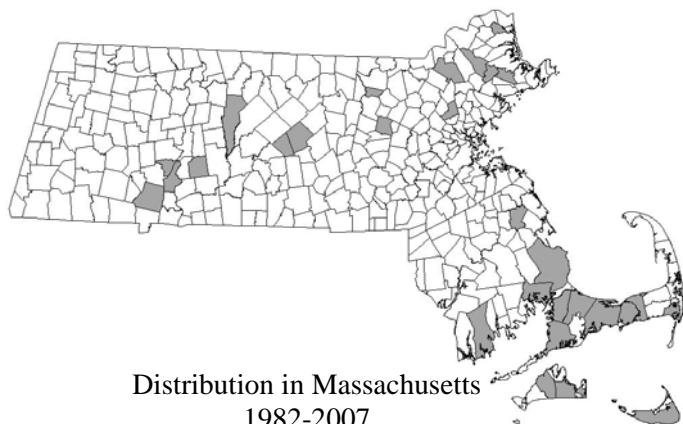
Massachusetts Division of Fisheries & Wildlife
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Description: New England Blazing Star (*Liatris scariosa* var. *novae-angliae*) is an endemic, globally rare perennial composite (family Asteraceae) of dry, sandy grasslands and clearings. It has showy purple flowers that bloom from late August to October.

Aids to identification: New England Blazing Star grows up to 2.6 feet (80 cm) in height, and has numerous alternate, entire (hairless), and very narrow (0.4–2 inches; 1–2.5 cm) stem leaves. Flowers are purple, and are borne in heads, generally with 3 to 30 heads per plant. The heads are hemispheric in shape, and have stalks that range in length from very short (these heads are sessile) to about 2 inches (5 cm). Flower heads have 20 to 80 flowers.

Similar species: New England Blazing Star is the only native *Liatris* in Massachusetts. Two non-native species, Gayfeather (*L. pycnostachya*) and Dense Blazing Star (*L. spicata*) resemble the native species somewhat; Gayfeather and Dense Blazing Star, however both have flower heads that are completely sessile, that are more cylindrical than hemispheric in shape, and that have far fewer flowers per head (5–14). Knapweeds (genus *Centaurea*) can sometimes be confused be Blazing Star as well. Knapweeds often have brownish or black fringed involucre bracts (bracts below the flower head), and lobed or toothed leaves.



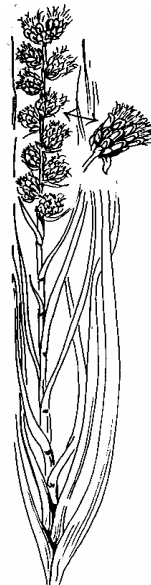
Distribution in Massachusetts
1982–2007

Based on records in Natural Heritage Database

New England Blazing Star *Liatris scariosa* var. *novae-angliae*

State Status: **Special Concern**

Federal Status: None



H.W. Rickett. 1963. *The New Field Book of American Wild Flowers*. G.P. Putnam's Sons, New York.

Habitat in Massachusetts: In Massachusetts, New England Blazing Star inhabits open, dry, low-nutrient sandy soils of grasslands, heathlands, and barrens. It thrives in fire-influenced natural communities that are periodically disturbed and devoid of dense woody plant cover. Associated species vary, but may include heaths (*Arctostaphylos uva-ursi*, *Gaylussacia* spp., *Vaccinium* spp.), Scrub Oak (*Quercus ilicifolia*), Bayberry (*Morella caroliniensis*), Little Bluestem (*Schizachyrium scoparium*), Wavy Hair-grass (*Deschampsia flexuosa*), Pennsylvania Sedge (*Carex pensylvanica*), and Butterfly Weed (*Asclepias tuberosa*).

Threats: Threats to New England Blazing Star include development, exclusion of disturbance (or rather, the resulting encroachment of woody species and accumulation of a thick organic soil layer), indiscriminant use of herbicides, mowing during the growing season, deer browse, and trampling.

Flowering time in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

Range: This taxon is endemic to the northeastern United States and is only known from Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, and Rhode Island; it is rare throughout its range. New England Blazing Star is assumed to be extirpated from New Jersey.

Population status in Massachusetts: New England Blazing Star is listed under the Massachusetts Endangered Species Act as a species of Special Concern. All listed species are legally protected from killing, collection, possession, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. New England Blazing Star is currently known from Barnstable, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Plymouth, and Worcester Counties, and is historically known from Bristol, Norfolk, and Suffolk Counties.

Management recommendations: As with many rare species, the exact management needs of New England Blazing Star are not known. Research has shown that populations of New England Blazing Star expand with high frequency fire disturbance; however substitute disturbances such as mowing can maintain suitable habitat as well, provided it is done after the growing season (November through April), and that areas of open exposed soils are retained to aid seed establishment.

Sites should be monitored for over-shading caused by habitat succession to dense shrub or tree cover. Also, population sites should be monitored for exotic plant species invasions because the disturbed nature of high-quality New England Blazing Star habitat can make it susceptible to exotic species establishment. If trampling or erosion are threats in recreational areas, trails can be stabilized or re-routed. To avoid inadvertent harm to rare plants, all active management of rare plant populations (including invasive species removal) should be planned in consultation with the Massachusetts Natural Heritage & Endangered Species Program.